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a second satellite sharing the eccentric, substantially 24-hour period geosynchronous orbit and the skytrack thereof, spaced apart from the first satellite; and

an operating arc defined by a subset of points on said skytrack over said service area, said subset of points less than said plurality of points, said first and second satellite operating sequentially on said operating arc and not operating outside the operating arc.

REMARKS

Applicant wishes to thank the Examiner for considering the present application. Claims 1 and 4-11 are pending in the application. New claim 12 has been added in this application. Applicant respectfully requests the Examiner to reconsider the current rejections to claim 1 and 4-11. Applicant has added no new matter to the application by these amendments.

Claim 4 stands objected to under 37 C.F.R. 1.75(c), as being of improper dependent form. Claim 4 has been amended to be dependent from claim 1. As noted, the Examiner treated claim 4 as being dependent from claim 1.

Claims 1 and 4-11 stand rejected under 35 USC §102(e) as being anticipated by *Briskman* (6,223,019). Applicant respectfully traverses.

The present invention has the advantages not realized, taught or suggested in the prior art. The present invention provides inclined eccentric geosynchronous orbits for a satellite system that advantageously enables a consistently high elevation angle from a service area. As will be discussed further below, the differences from the *Briskman* reference are highlighted by the fact that claim 1 recites "an operating arc defined by a subset of points on said skytrack toward said service area, said satellite operating on said operating arc." To illustrate this point, the Examiner is directed to Figures 4 and 5. Figure 4 is from the perspective of space beyond the satellite looking back toward the Earth. An equirectangular-projection map 36 shows North America and a substantial portion of South America. An example ground track 32 is shown that is projected from

the IEGO orbit. Two similar satellites, A & B, are shown sharing ground track 32 and are separated by a half a period. Active satellite A is about to start operation as it rises through a eastern handover point 38 (latitude, longitude = 24.0N, 83.0W). Satellite B is concurrently setting through a western handover point 40 (latitude, longitude = 24.0N, 109.0W). The distance between eastern handover point 38 and western handover point 40 is defined as the operating arc 44. Claim 12 has been added to capture the two satellites operating sequentially in turn on the operating arc. The operating arc 44 is the portion of the ground track or a portion of the skytrack (which remains in a cone overhead), when viewed from a point on the ground, over which the satellites operate.

Applicant respectfully submits that each and every element of claim 1 is not found in the *Briskman* reference and therefore claims 1 and 4-12 are believed to be patentable over *Briskman*. The *Briskman* reference is directed to a high latitude service area satellite mobile broadcasting system. The system is particularly suitable for use in a satellite radio broadcasting system. Although the *Briskman* reference uses 24 sidereal hour orbits with inclinations, orbital planes, right ascensions, and eccentricities chosen to optimize coverage of a particular service area, no teaching or suggestion is provided in the reference for providing an operating arc as a subset of points on the skytrack over the service area. In fact, the *Briskman* reference teaches away from the use of an operating arc. That is, the *Briskman* reference is used for eliminating multi-path interference in a broadcast system. The broadcast system is desired to use more than one broadcast source separated by a time delay. As is illustrated in the plots, particularly in Figs. 2, 3, 4, and 5, more than one satellite is active at a particular time to eliminate multi-path interference. As described in Col. 5, lines 52-58, one satellite may have an elevation angle of at least 60 degrees while another satellite may have an elevation angle of at least 25 degrees. However, no teaching or suggestion is provided for providing a subset of points on the skytrack and operating the satellite only on the subset of points. Advantages to the present invention include the ability to recharge the batteries while the satellite is not operating. Each of the independent claims, namely claims 1, 8, 9, and 12 recite similar

limitations with respect to the operating arc. Therefore, because each and every element of claims 1, 8, 9, and 12 is not recited in the *Briskman* reference, applicant respectfully believes that these claims are patentable. Likewise, claims 4-7, 10, and 11 recite more specific limitations to their independent claims, these claims are also believed to be patentable over *Briskman* as well.

In light of the above amendments and remarks, applicant submits that all of the previous rejections and objections are now overcome. The application is now believed in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments which would place the application in better condition for allowance, he is respectfully requested to call the undersigned attorney.

Respectfully submitted,

Vijayalakshmi D. Duraiswamy

Vijayalakshmi D. Duraiswamy
Reg. No. 31,505

Hughes Electronics Corporation
ES/001/A109
P.O. Box 956
El Segundo, CA 90245-0956

(310) 662-9919

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 4. (Amended) A system as recited in claim [3] 1 wherein said orbit has an eccentricity factor between about 0.1 and 0.5.

Claim 12. (New) A satellite system above a landmass comprising:

a service area on a surface of the earth having a predetermined minimum elevation angle from the horizon;

a first satellite having an eccentric, substantially 24-hour period geosynchronous orbit with respect to the earth, and having skytrack when viewed from within said service area, said orbit comprised of a plurality of points through which the satellite passes and being inclined relative to an equatorial plane of the earth;

a second satellite sharing the eccentric, substantially 24-hour period geosynchronous orbit and the skytrack thereof, spaced apart from the first satellite; and

an operating arc defined by a subset of points on said skytrack over said service area, said subset of points less than said plurality of points, said first and second satellite operating sequentially on said operating arc and not operating outside the operating arc.